

What is claimed is:

1. A lithographic printing original plate having a photosensitive layer on a substrate directly or on an another layer provided thereon, said photosensitive layer being made  
5 of a crosslinked polymer having ink repellency, and having properties that the photosensitive layer is changed from ink-repellent to ink-receptive by irradiation with a light.

2. The lithographic printing original plate as claimed  
10 in claim 1, wherein the photosensitive layer is a photosensitive hydrophilic resin layer obtained by crosslinking a photosensitive composition comprising a hydrophilic polymer, a crosslinking agent and a light absorbing compound.

3. The lithographic printing original plate as claimed  
15 in claim 1, wherein the photosensitive layer is a photosensitive hydrophilic resin layer obtained by crosslinking a photosensitive composition comprising a hydrophilic polymer, a crosslinking agent, a light absorbing compound and a  
20 hydrophobic polymer.

4. The lithographic printing original plate as claimed in claim 2, wherein the photosensitive hydrophilic resin layer

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has a phase separation structure consisting of a hydrophilic polymer phase and a hydrophobic polymer phase.

5. The lithographic printing original plate as claimed  
5 in claim 3, wherein the hydrophilic polymer is a polymer  
containing as a main component one or more monomers selected  
from unsubstituted or substituted (meth)acrylamide,  
N-vinylformamide and N-vinylacetamide, the hydrophobic  
polymer is an aqueous dispersion polymer having an average  
10 particle diameter of 0.005 to 0.5  $\mu\text{m}$  and a film forming  
temperature of not higher than 50°C, and the photosensitive  
hydrophilic resin layer has a phase separation structure  
consisting of a hydrophilic polymer phase and a hydrophobic  
polymer phase.

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6. The lithographic printing original plate as claimed  
in claim 4 or 5, wherein the photosensitive layer has a property  
which is locally foamed by irradiation with a light and changed  
from ink-repellent to ink-receptive.

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7. A process for producing a lithographic printing  
plate, comprising irradiating the lithographic printing  
original plate of claim 5 or 6 with a light having a wavelength  
of 750 to 1100 nm.

8. A lithographic printing plate obtained by irradiating a lithographic printing original plate having a photosensitive layer on a substrate directly or on an another layer provided thereon, said photosensitive layer being made of a crosslinked polymer having ink repellency, with a light to change the photosensitive layer from ink-repellent to ink-receptive.

9. The lithographic printing plate as claimed in claim 8, wherein the photosensitive layer is a photosensitive hydrophilic resin layer obtained by crosslinking a photosensitive composition comprising a hydrophilic polymer, a crosslinking agent and a light absorbing compound.

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10. The lithographic printing plate as claimed in claim 8, wherein the photosensitive layer is a photosensitive hydrophilic resin layer obtained by crosslinking a photosensitive composition comprising a hydrophilic polymer, a crosslinking agent, a light absorbing compound and a hydrophobic polymer.

11. The lithographic printing plate as claimed in claim 9, wherein the photosensitive hydrophilic resin layer has a

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phase separation structure consisting of a hydrophilic polymer phase and a hydrophobic polymer phase.

12. The lithographic printing plate as claimed in claim  
5 10, wherein the hydrophilic polymer is a polymer containing  
as a main component one or more monomers selected from  
unsubstituted or substituted (meth)acrylamide,  
N-vinylformamide and N-vinylacetamide, the hydrophobic  
polymer is an aqueous dispersion polymer having an average  
10 particle diameter of 0.005 to 0.5  $\mu\text{m}$  and a film forming  
temperature of not higher than 50°C, and the photosensitive  
hydrophilic resin layer has a phase separation structure  
consisting of a hydrophilic polymer phase and a hydrophobic  
polymer phase.

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13. The lithographic printing plate as claimed in claim  
11 or 12, wherein the photosensitive layer is locally foamed  
by irradiation with a light and changed from ink-repellent  
to ink-receptive.

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14. The lithographic printing plate as claimed in claim  
12 or 13, wherein the light for the irradiation has a wavelength  
of 750 to 1100 nm.

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